We claim:

1. A method for delivering particles which comprise a nucleic acid molecule to a target tissue or cell, wherein said particles do not include a biolistic core carrier, said method comprising administering said particles to the target tissue or cell by needleless syringe.

2. The method of claim 1, wherein the particles have an average size that is equal to or larger than the size of the target cell.

3. The method of claim 2, wherein the particles have an average size predominantly in the range of about 10 to 250 μm.

4. The method of claim 1, wherein the particles are administered to the target tissue or cell at a momentum density of between 2 and 10 kg/sec/m.

5. The method of claim 1, wherein the particles are delivered to a cell in epidermal tissue.

6. The method of claim 1, wherein the particles are delivered to a cell in the *stratum basal* layer of skin tissue.

7. The method of claim 1, wherein the particles are comprised of a nucleic acid molecule and a pharmaceutically acceptable excipient.

8. The method of claim 7, wherein the excipient comprises trehalose.

9. The method of claim 1, wherein the particles are delivered to the target tissue or cell *in vivo*.

10. The method of claim 1, wherein the particles are delivered to the target tissue or cell *ex vivo*.

11. The method of claim 1, wherein the nucleic acid molecule comprises a gene encoding a protein that is defective or missing from the target cell genome.

12. The method of claim 1, wherein the nucleic acid molecule comprises a nucleotide sequence encoding an immunogen.

13. A particulate nucleic acid composition suitable for administration to a target tissue or cell by needleless syringe, wherein said composition does not include a biolistic core carrier.

14. The particulate nucleic acid composition of claim 13, wherein the composition is entrained within a supersonic gas flow.

subC1

15. A method for forming densified particles from a particulate pharmaceutical preparation, comprising compacting the preparation to provide a compacted pharmaceutical preparation and size-reducing the compacted preparation into densified particles of suitable size and density for transdermal delivery thereof by needleless injection.

16. A method according to claim 15, wherein the suitable size is in the range of about 0.1 to 150 μm mean diameter.

17. A method according to claim 16, wherein the suitable size is in the range of about 20 to 60 μm mean diameter.

18. A method according to claim 15, wherein the densified particles have a particle density in the range of about 0.5 to 3.0 g/cm³.

19. A method according to claim 18, wherein the particle density is in the range of about 0.8 to 1.5 g/cm³.

20. A method according to claim 15, wherein the particulate pharmaceutical preparation is a lyophilized or spray-dried composition.

21. A method according to claim 15, wherein compacting is carried out in a press at about 1,000 to 24,000 pounds per square inch.

22. A method according to claim 21, wherein compacting is carried out under vacuum.

23. A method according to claim 15, wherein compacting is carried out without heating or shear.

SUB A3

24. A method according to claim 15, wherein size reducing of the compacted material is carried out by milling and/or sieving.

SUB B1

25. A method according to claim 15, wherein the method further comprises selecting densified particles using size classification.

SUB B' CONT.

26. A method according to claim 25, wherein the size classification of the densified particles is carried out using sieving or cyclone separation.

27. A method according to claim 15, wherein the particulate pharmaceutical preparation is a preparation of a peptide or protein.

28. A method according to claim 15, wherein the particulate pharmaceutical preparation is a preparation of a gene construct.

SUB C2

29. A densified particulate pharmaceutical composition formed from a lyophilized or spray-dried pharmaceutical preparation, said densified composition having an average particle size in the range of about 0.1 to 250 μm mean diameter and a particle density in the range of 0.1 to 25 g/cm^3.

30. A composition according to claim 29, wherein the lyophilized or spray-dried pharmaceutical preparation is a heat-sensitive biopharmaceutical preparation.

31. A composition according to claim 29, wherein the lyophilized or spray-dried pharmaceutical preparation is a preparation of a peptide or protein.

32. A composition according to claim 29, wherein the particulate pharmaceutical preparation is a preparation of a gene construct.

33. A composition according to claim 29, wherein the particle size is in the range of about 0.1 to 150 μm mean diameter.

34. A composition according to claim 33, wherein the particle size is in the range of about 20 to 60 μm mean diameter.

35. A composition according to claim 29, wherein the particle density is in the range of about 0.5 to 3.0 g/cm³.

36. A composition according to claim 35, wherein the particle density is in the range of about 0.8 to 1.5 g/cm³.

37. A compacted particulate pharmaceutical composition formed from a porous pharmaceutical preparation, said compacted composition having an average particle size in the range of 0.1 to 250 μm mean diameter and a particle density in the range of 0.1 to 25 g/cm³.

38. Particles of a suitable size and density for transdermal delivery by needleless injection, consisting of a gene construct and a pharmaceutically acceptable excipient.

39. A unit-dosage container for a needleless syringe comprising a compacted particulate pharmaceutical preparation according to claim 37.

40. A method of delivering a selected pharmaceutical agent to a vertebrate subject, said method comprising providing a compacted particulate pharmaceutical preparation according to claim 40 and delivering the preparation to a target tissue or cell of the vertebrate subject by needleless syringe.